OFFICE OF THE UNITED STATES TRADE REPRESENTATIVE,
TRADE POLICY STAFF COMMITTEE

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JAPANESE RESPONDENTS' EXCLUSION REQUESTS FOR CARBON AND ALLOY FLAT PRODUCTS AND CARBON AND ALLOY LONG PRODUCTS

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TABLE OF CONTENTS

INTRODUCTION

On November 13, 2001, Japanese respondents submitted several requests to exclude specialty products that are not available in the United States or are not produced in commercial quantities. Since then, we have received additional information that is relevant to these requests, which we summarize in this submission.

In particular, parties were given the opportunity to comment on exclusion requests. In some cases, the domestic industry informed the Trade Policy Staff Committee ("TPSC") that they do not oppose exclusion of certain products. Assuming no other opposition arises to these requests, the Administration should grant them, and exclude all other products the domestic industry has shown no interest in restricting.

For other contested exclusion requests, domestic producers claimed to make the imported product or a substitutable product. Although domestic industry agreement should not be the only basis for granting exclusion requests, we have endeavored to respond to any opposition by revising definitions to differentiate imports from U.S. material. Revised definitions are provided herein. We will work with counsel to the domestic industry to seek their agreement to exclude products based on the newly revised definitions.

In addition, we note that the domestic producers often claim that they *can* make a product, when U.S. purchasers know that the mills are either unable or unwilling to meet the rigorous quality standards offered by Japanese mills, especially given the small quantity requirements. U.S. customers submitted affidavits in briefing before the U.S. International Trade Commission and attended meetings with the TPSC to urge for exclusion of the specialized products they import from Japan. With these customers' assistance, we have demonstrated – whenever possible – that domestic product cannot substitute for Japanese imports. Alternatively, customers have explained that the domestic industry imposes minimum quantity requirements to sell such specialized products. The customers purchase far less than the required minimum and therefore are dependent on imports.

Finally, we note that in several instances the domestic industry opposed an exclusion request, claiming that one or more U.S. mill can produce the product. The identity of the possible U.S. mills was not revealed publicly. Without this information, we cannot respond adequately to the domestic industry's objection and U.S. customers have no way of determining whether the producer can actually supply the product they require. The USTR recently instructed the domestic industry to disclose publicly by January 16, 2002, the identity of possible U.S. suppliers, as well as other important information that has been withheld as proprietary information. Once we receive this additional information, we will work to address the domestic industry's concerns.

These issues were discussed in detail during meetings held with the U.S. Department of Commerce on December 21 and 26, 2001, and the TPSC on January 10-11, 2002. For the Committee's convenience, we summarize below any new arguments or information since our November 13, 2001, exclusion requests for certain specialized carbon and alloy flat and long products from Japan.

A. Abrasion-Resistant Plate (X-142.16)

We are submitting revised definitions for abrasion resistant plate in response to the domestic industry's opposition to this request. See **Exhibit 1**.[1] Neither Weirton, WCI, nor the minimills opposed this request. At least one of the larger integrated mills claims to produce this product as originally defined. We are confident that no U.S. mill can produce plate to the rigorous specifications provided in the new definitions. As Gordon Aubuchon of Steel Warehouse explained to the TPSC during our January 11 meeting, there are no domestic steel mills that are willing to produce to the A6 ASTM standard. This standard is an objective, industry recognized standard that restricts the amount this plate can deviate from the desired result and still meet the standard. Essentially, this means that the U.S. mills either refuse to or are unable to make a product that will meet Steel Warehouse's customers' needs.

In addition, half of Steel Warehouse's plate is bought to meet half of the A6 ASTM standard. This means that this plate can only deviate from the specifications by half of the amount necessary to meet the full A6 ASTM standard. For example, if the ASTM standard permits a one inch deviation in flatness, the half standard allows the plate to deviate by only ½". The mills are not even able to meet the full A6 ASTM standard, and certainly cannot meet half of that standard.

One of the revised definitions, **definition 6**, includes a significant amount of titanium. Also, this plate has a patent on it in the United States -- USA Patent No. 5236521, 5284529. Therefore, by law, there is no other plate like it produced in the United States. As Mr. Len Wolowiec, President of Universal Steel America -- Houston explained in his affidavit, this plate is not available domestically.[2] This plate was developed in Japan in the early 1990's and the U.S. mills have not been able to duplicate it. Titanium is a difficult element to work with in this great of a quantity and the U.S. mills decided not to enter this market.

There is no concern about any of these plate products being substituted for domestically produced plate. Customers pay a higher price for this imported plate because of its superior quality. In fact, the average price is approximately $500/st. We have narrowed our request to specifically match those plate products that U.S. customers must import because they are not available domestically. U.S. customers will only buy this more expensive plate when the domestically available plate does not meet their requirements.

B. Certain High-Alloy Plate (X-142.17)

We are submitting revised definitions for certain high-alloy plate. See **Exhibit 1**. Based upon the previous definition, the domestic industry opposed our request. We are

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[1] **Exhibit 1** contains all of our current revisions to our exclusion requests. Revisions for cold-rolled steel for band saws and coated steel for HS Bands were previously submitted. Also, please note that the revised definitons for abrasion-resistant plate and high-alloy plate are narrower than the previous requests. We tailored these definitions to differentiate further the specialized plate that is imported from Japan.

[2] *See* X-142.16, Exclusion Request for Abrasion Resistant Plate at Att. D (Nov. 13, 2001)

confident, however, that the U.S. mills will not be able to make the plate as specified in these revised specifications. Attached as **Exhibit 2** is the testimony of Dan Cadotte, Chief Materials Engineer, of Grove Worldwide.[3] His testimony is particularly informative because it addresses a question that was raised in a prior meeting with the Department of Commerce. Quenched and tempered plate is not the same plate as controlled-rolled plate, or TMCP (thermo-mechanically controlled-rolled plate). TMCP with a minimum 100 ksi yield is not produced in the United States. This product is particularly crucial to Grove because over 65 percent of the steel they use in their cranes is TMCP.

TMCP has superior flatness and surface quality as compared to the quenched and tempered plate. A quick glance at the pictures in **Exhibit 2** shows how the quench and temper process creates an excessively curved product.[4] Crane bodies cannot be curved, and so flat plate is essential. The plate in this attached picture was purchased from Bethlehem-Lukens. It was after repeated attempts at purchasing their plate that Grove had to end a 20-year purchasing relationship with them. Not only was the quenched and tempered plate curved, it also had excessive mill scale. This mill scale must be removed. Even though Grove was willing to pay Bethlehem-Lukens to provide surface critical plate, they refused.

The bottom line for Grove, and for many U.S. customers, is that they need this TMCP to manufacture a product to their customers' specifications. If tariffs or quotas are placed upon the imported TMCP and Grove is unable to continue production in the United States, it will have to consider moving their manufacturing overseas. It is ironic that Grove has been trying to move significant parts of the German production process to the United States. Instead, it might end up having to move U.S. production to Germany because the plate it needs is not available in the United States, but may nonetheless be subject to the remedy in this case.

As with the abrasion-resistant plate request, we have tailored the request for high alloy plate to match those imports that U.S. customers require and cannot find domestically. This plate sells for over $700/st and therefore would not be substituted for commodity-grade alloy plate. For these reasons, certain high alloy plate, as defined in **Exhibit 1**, should be excluded from the remedy determination in this investigation.

In addition to the requests for TMCP, we are requesting exclusion of certain quenched and tempered high alloy plate. This plate is superior to the product that is available domestically for several reasons. First, the Japanese plate referred to as "surface critical," meaning that it has been blasted to remove mill scale and inspected for quality. This is something that Bethlehem-Lukens refused to do even when Grove offered to pay more for the plate. In addition, this imported plate is kept to very tight tolerances and several of the definitions guarantee half of the ASTM standard for flatness. The domestic mills refuse to guarantee even the full ASTM standard, let alone half of that standard. This means that the

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[3] We are submitting only Mr. Cadotte's testimony before the TPSC because he is the only witness for which we did not previously submit an affidavit.

[4] *See* **Exhibit 3**. This steel plate was provided by Bethlehem-Lukens and was rejected by Grove because of its poor quality.

Japanese plate is consistently flatter and of a higher quality than the plate that is offered domestically. Therefore, quenched and tempered plate, as defined in our revised definitions should also be excluded from the remedy recommendation to the President.

C. High-Carbon Hot-Rolled Alloy Steel Plate and Sheet (X-142.22, X-142.18)

It is important to note that Senator Voinovich from Ohio has expressed his support for exclusion of high-carbon hot-rolled alloy steel plate and sheet, and his letter is attached in **Exhibit 2**. In addition, we are submitting an amended specification for this product, limiting our request to cover widths of only 36" and above. *See* **Exhibit 1**. WCI has been opposing our request, but can only make this product up to 36". We are asking only for the exclusion of imports in widths greater than the sizes produced domestically. These larger sizes are necessary to produce the larger circular saw blades. Saw blades larger than 36" cannot be made with steel that is narrower that 36". Currently, WCI is the only known domestic producer of this steel and they are limited to widths under 36". Only approximately 6,000 st are imported from Japan each year. With such small demand, other domestic mills apparently have no desire to enter this market.

In addition, this is a difficult product to make. WCI has had some serious quality problems with their steel. As you can see in the **Exhibit 3**, Peerless Saw explained to the TPSC the inadequacies in WCI's steel. It is not sufficiently flat, and has significant bruises and roll marks. These saws must be made very thin, which emphasizes any defects. Some of Peerless Saws' customers will not accept saws made from domestic material because of these defects. For example, Cirtec informed Peerless that it wanted the higher quality steel for their saws and therefore would only buy circular saw blades from Peerless if they were made from imported material. U.S. circular saw purchasers will prefer to buy imported saws rather than use saws made from inferior steel. WCI's quality and size limitations are the reasons U.S. saw blade manufacturers must purchase this imported steel from Japan.

The U.S. saw blade industry is under fierce competition from both Germany and Canada. As Mr. Gase of Peerless Saw stated in the January 11 TPSC meeting, he has lost business to the German saw blade industry from one of his customers, O'Saw in Chicago. If the cost of imported steel were to increase, this would price many of the U.S. saw blade manufacturers out of the market. Similarly, if they were forced to use only material from WCI, they would lose customers who demand the higher quality saws and also, those customers who want saws larger than 36" in diameter. Finally, quotas are not a viable alternative as there are several purchasers of this steel for saw blades and these U.S. companies need a constant source of supply. This steel should be excluded from the remedy recommendations to President Bush.

D. SCM 415 Hot-Rolled Steel (X-144)

Please reference the separate brief submitted on January 17, 2002, covering products used in parts for Sony Electronics.

E. SCM 415 (Modified) Hot-Rolled Steel (X-142.19)

Please reference the separate brief submitted on January 17, 2002, covering products used in parts for Sony Electronics.

F. NST490 Hot-Rolled Steel (X-142.25)

Please reference the separate brief submitted on January 17, 2002, covering products used in parts for Sony Electronics.

G. Hot-Rolled Bearing Quality Steel (X-142.23)

Commissioner Devaney recommended exclusion of hot-rolled bearing quality steel. The American Bearing Manufacturers Association also support this exclusion request:

> Difficulties associated with the production of the bearing steel …, as well as the varying demands of different U.S. bearing producers, have created a significant gap between the domestic supply of, and demand for, these products. Antifriction bearings operate under a wide-range of challenging conditions. It is thus to be expected that the bearing steel specifications for one U.S. bearing producer will differ from those of another bearing producer, and that the bearing steel specifications for one bearing type will differ from those for another bearing type depending on each bearing's function. For this reason, the ABMA supports statements by U.S. bearing producers as to the absence of fully qualified U.S. producers of certain bearing steel products. In other words, the fact that a steel producer may potentially demonstrate a capability to manufacture bearing steel for one U.S. bearing producer does not necessarily mean the steel it manufactures will meet the requirements demanded by another U.S. bearing producer. Similarly, the fact that a steel producer may be able to manufacture an early-stage bearing steel product, does not mean there exists in the United States an ability to further process that early-stage product into the final product required by the U.S. bearing producer.[5]

During a December 26, 2001, meeting with the Commerce Department concerning various exclusion requests, we were asked why this product was referred to as "bearing quality." As we explained at the January 11, 2002, TPSC meeting, this description was used in the definition of the exclusion from the 1999 hot-rolled steel antidumping investigation:

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[5] ER-049-ABMA.pdf, American Bearing Manufacturers Association, *Comments on Possible Actions Under Section 203 – Certain Steel Products – Exclusion Requests (Bearing Steel)* at 3-4 (Dec. 5, 2001).

> *Hot-rolled bearing quality steel*, SAE grade 1050, in coils, with an inclusion rating of 1.0 maximum per ASTM E 45, Method A, with excellent surface quality and chemistry restrictions as follows: 0.012 percent maximum phosphorus, 0.015 percent maximum sulfur, and 0.20 percent maximum residuals including 0.15 percent maximum chromium.[6]

"Bearing quality" is a common industry term for this steel. Indeed, the domestic industry itself requested that hot-rolled bearing quality steel be excluded from the scope of that case because "{t}his steel product meets very specific chemical, physical, and mechanical specifications."[7] In particular, the high cleanliness makes this product of bearing quality, as indicated by the inclusion rating in the definition. Bearings require clean steel with few inclusions, which can cause surface defects or can weaken the steel. Such defects can cause the bearing to rattle and possibly loosen the entire bearing. An inclusion rating and excellent surface quality described above therefore, qualify this steel as "bearing quality."

H. Hot-Rolled Anti-Corrosion Steel Sheet (X-142.15)

The domestic industry opposes our exclusion request for hot-rolled anti-corrosion steel sheet, but has provided insufficient information for the basis of their objection. On behalf of the integrated mills, Dewey Ballantine and Skadden Arps claim that a domestic producer can make this product, but the name of the mill is proprietary. For the minimills and Weirton, Schagrin Associates oppose, vaguely stating that the product can be produced in the United States. Without more detail, we cannot adequately respond to the domestic industry's concerns about this exclusion request.

We understand that the USTR has asked the domestic industry to make public the names of U.S. mills that claim to produce various products that are the subject of exclusion requests. This information is due by January 16, 2002. Once we receive this information, we will work to address the domestic mills' objection.

I. Hot-Rolled Alloy Sheet (X-142.14)

During a December 26 meeting with the Commerce Department, it was suggested that we update this request to a current ASTM standard. Please refer to **Exhibit 1** for a revised definition that covers the same specialized steel as our original exclusion request.

Phil Lewis, President of SeaCAT, and former Chairman of the Committee on Pipe and Tube Imports, spoke at our January 11 TPSC meeting on the availability of this steel in the

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[6] *Notice of Final Determination of Sales at Less Than Fair Value: Hot-Rolled Flat-Rolled Carbon-Quality Steel Products From Japan*, 64 Fed. Reg. 24329, 24331 (May 6, 1999) (emphasis added).

[7] U.S. Department of Commerce Memorandum, "Antidumping and Countervailing Duty Investigations of Hot-Rolled Flat-Rolled Carbon-Quality Steel Products from Brazil, Japan, and the Russian Federation: Scope Amendments" at 6 (Feb. 12, 1999).

United States. SeaCAT uses this steel to manufacture umbilical tubing for underwater drilling operations. This tubing carries various chemicals to the underwater wellheads, and so, if the tubing is flawed, it could leak and cause serious damage to the environment. This product must meet more than just the ASTM specification, but must also pass SeaCAT's quality tests. Steel that is produced domestically does not meet SeaCAT's high quality standards.

The domestic industry is opposing this request, but refuses to make public the names of those mills who claim to produce it. Mr. Lewis of SeaCAT Corp. has asked Bethlehem Steel to provide this steel in the past. They refused because SeaCAT would only purchase small quantities. In fact, less than 1,000 short tons were imported from Japan in 2000. The larger integrated mills are not willing to supply a specialty steel in such small quantities.

If SeaCAT could buy this steel domestically, it would continue to do so. However, none of the mills is able or willing to make this specialized hot-rolled alloy sheet. Placing tariffs or quotas on this steel would merely place SeaCAT at a competitive disadvantage to the European umbilical tubing manufacturers without any benefit to the U.S. steel industry.

J. Cold-Rolled Steel for Battery Jackets (X-142.20)

The Japanese producers requested exclusion of a batch-annealed and temper-rolled cold-rolled steel that is used by Worthington to produce battery jackets for the major U.S. battery manufacturers. Our November 13 exclusion request (X-142.20) defined the product as follows:

> Certain batch annealed and temper-rolled cold-rolled continuously cast steel (including tin mill black plate), which meets the following characteristics: Chemical Composition, Weight %: C <0.08, Si <0.04, Mn <0.40, P <0.03, S <0.03, Al 0.010-0.07. Thickness Tolerance: +/5 percent (aim +/4 percent), Guaranteed inside of 15 mm from mill edges, Width Tolerance: -0/+7 mm, Hardness (Hv): Hv 85-110, Tensile Strength: >275N/mm^2; Elongation: >36%; Grain = equiaxed; Grain size = min. 8.5; Lankford value: greater than 1.2; Delta 'r' value = less than +/- 0.2.

Worthington also requested exclusion of three types of cold-rolled steel for battery jackets (X-036):[8]

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[8] Worthington first submitted its exclusion request to the USTR on November 12. However, the definitions were incorrect, in several instances providing for chemical ranges only less/greater than the specified percentage. The ranges should have been *equal to or* less/greater than the percentage. Worthington revised the definitions on December 27. This submission provides the accurate definitions in accordance with Worthington's December 27 submission to the USTR.

Product 1: ASTM 625-76 D <Modified>

Product description - Certain full-hard cold-rolled continuously cast steel (including tin mill black plate), which meets the following characteristics: Chemical Composition, Weight %: C 0.02 - 0.06, Si <=0.03, Mn 0.20 - 0.40, P <=0.02, S <=0.023 (aim 0.018), Al 0.03-0.08 (aim 0.050), N 0.003 - 0.008 (aim 0.005). Thickness Tolerance: +/- 5 percent guaranteed from 1.25" from width edge, Width Tolerance: -0/+0.275", Flatness Deviation: <= 20 'I' units, Transverse Curvature: <= 0.125", Hardness (HR30T): 53 +/-5; Tensile Strength: 345-421N/mm2, Yield Strength: 228-338 N/mm^2, Elongation: >= 30%; Lankford Value: 1.2 min., Grain size = 9-11, Delta r value = less than +/- 0.2; Surface roughness (RA- microinches): 8 to 24 (stone). Inclusion level: SEM shall not reveal oxides greater than 1 micron. Inclusion groups or clusters shall not exceed 5 micron in length. Applicable gauge and widths:

0.0082" nominal x 34.000"
0.0090" nominal x 32.700"
0.0102" nominal x 32.500"
0.0122" nominal x 34.375"
0.0122" nominal x 36.000"

Product 2: JIS G3141 - SPCE < modified>

Certain batch annealed and temper-rolled cold-rolled continuously cast steel (including tin mill black plate), which meets the following characteristics: Chemical Composition, Weight %: C <=0.08, Si <=0.04, Mn <=0.40, P <=0.03, S <=0.03, Al 0.010-0.07. Thickness Tolerance: +/- 5 percent (aim +/4 percent), Guaranteed inside of 15 mm from mill edges, Width Tolerance: -0/+7 mm, Hardness (Hv): Hv 85-110, Tensile Strength: >=275N/mm^2; Elongation: >=36%; Grain = equaixed; Grain size = min. 8.5; Lankford value: granter than 1.2; Delta r value = less than +/- 0.2.

Product 3: JIS 3141 - modified for battery cell application

Certain continuous annealed cold-rolled continuously cast steel (including tin mill black plate), which meets the following characteristics: Chemical Composition, Weight %: C <=0.08, Si <=0.03, Mn <=0.45, P <=0.02, S <=0.02, Al <=0.08, As <=0.02, Cu <=0.05, N <=0.004, Cr <=0.05, Ni <=0.05, Mo <=0.01. Thickness Tolerance: +/- 5 percent guaranteed from 1.25" from width edge, Width Tolerance: -0/+ 0.275", Flatness Deviation: <= 10 'I' units, Transverse Curvature: <= 0.118 ", Hardness (HR15T):

76-82; Tensile Strength: 345-414 N/mm^2, Yield Strength 241-310 N/mm^2, Elongation: >=25%; Grain size (ASTM) = 9-11, Delta r value = less than +/- 0.2; Surface roughness (RA- microinches): 10 - 20. Nonmetallic Inclusions: <=0.20 pcs./m^2 as measured by IDD (Internal Defect Detector) instrument designed by Toyo Kohan.

The Japanese producers' exclusion request for cold-rolled steel for battery jackets (X-142.20) corresponds to Product 2 of Worthington's request. The domestic industry opposes none of these exclusion requests. In their December 7, 2001, submission to the USTR, the minimills and Weirton stated that they did not oppose exclusion of these products provided that no other U.S. mill can produce them. The integrated mills originally opposed exclusion of the batch-annealed cold-rolled steel (Japanese request: X-142.20 and Product 2 of Worthington's request: X-036), but agreed to the other two products that Worthington asked to be excluded. We were informed last week that the integrated mills have withdrawn their opposition to the batch-annealed cold-rolled steel, which they will formally submit to the USTR. Finally, in a January 11, 2002, letter to Mr. Richard Weible of the Commerce Department, the Association of Cold Rolled Strip Steel Producers stated that they do not oppose exclusion of any of the three products that are used for battery jackets. Therefore, we urge the President to recognize that the domestic industry does not require import restrictions on these specialized cold-rolled steel products and exclude them from any remedy.

K. Non-Oriented, High Silicon, Magnetic Steel Sheet (X-142.21)

This specialized cold-rolled steel product is used in the power industry for high-frequency reactors and generators. The U.S. steel industry does not oppose exclusion of non-oriented, high silicon, magnetic steel sheet. AK Steel (a U.S. producer of non-oriented electrical steel), which is represented by Collier & Shannon, does not oppose this request. Schagrin Associates, which represents the minimills and Weirton, also does not oppose this request. The Association of Cold Rolled Strip Steel concurs, as indicated in their January 11 letter to the Commerce Department. However, on behalf of the integrated mills, Dewey Ballantine and Skadden Arps claim that WCI Steel Inc. can produce this product, but WCI is represented by Mr. Schagrin. Given that WCI, through Mr. Schagrin, does not oppose the request, the TPSC should assume that there is no domestic opposition to this exclusion request.

L. Cold-Rolled Steel for Band Saws (X-142.12)

We revised the definition for band saw steel on December 20, 2001. In response, we received an e-mail from the law firm representing the Association of Cold-Rolled Strip Steel Producers, withdrawing the objection of Gibraltar Steel and Greer Steel to the exclusion of cold-rolled steel for band saws. (**See Exhibit 4**.) Only Thompson Steel continues to object, even though it is not commercially selling this steel.

Thompson Steel has been attempting to make band saw steel since 1997 and to this day has not commercially sold any of this specialized steel. Given its past failures, it is highly unlikely that Thompson will be able to meet U.S. demand. We also learned that WCI is opposing this request. This is peculiar because WCI does not have the finishing capabilities to

make this steel, which would require it to send out the product to be hardened, tempered, and polished. WCI also does not list cold-rolled steel for band saws as a product for sale on their website.[9]

Finishing steel by hardening, tempering, and polishing in one continuous process is very involved and difficult to perform. The cold-rolled steel is heat treated to approximately 1400-1500^0 F, creating an austenitic steel. It is then rapidly quenched to create an untempered martensitic steel that is very hard but also very brittle. The steel is subsequently reheated to 600-650^0 F to create a tempered, martensitic steel that is ductile and hard. The steel is then polished.

This finishing process is performed in an Ebner furnace, which is a continuous line that re-coils the steel when the finishing is completed. Only two U.S. mills own an Ebner furnace – Theis Precision Steel and Thompson Steel. Theis is not making band saw steel, nor is it even attempting to make it. Indeed, Theis has not registered opposition to this exclusion request. Thompson has not commercially sold any band saw steel. Therefore, WCI would not be able to have this steel finished in the United States. WCI's objection to this request is unwarranted.

Even if Thompson were able to manufacture and certify their steel, Thompson's product does not contain nickel. It is the alloying effects of nickel that make this steel uniquely suitable for band saw manufacturing. The following is an excerpt from *Modern Steels and Their Properties*:

> Nickel is one of the fundamental steel alloying elements …. It provides improved toughness, particularly at low temperatures; simplified and more economical thermal treatment; increased hardenability; less distortion in quenching; and improved corrosion-resistance. Nickel steels permit higher strengths in steels that require welding, particularly where there is a high carbon content. Nickel additions increase toughness, plasticity and fatigue-resistance.[10]

Nickel is a crucial element that affects many of the qualities inherent in this steel. Nickel is essential in allowing band saw manufacturers to cold work the steel and create a weld that will stand up to the strain and pressures exerted in the sawing process. This is particularly true in the wider and heavier gauge saws. The steel that Thompson claims it can produce is not a substitute. Finally, Thompson Steel is unable to give a clean #1 edge that is perfectly square and free of burrs. This too is an important characteristic of band saw steel.

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[9] *See* www.wcisteel.com.

[10] Bethlehem Steel, *Modern Steels and Their Properties* 21 (1978). It is important to clarify that Bethlehem Steel does not make band saw steel. This book discusses in very general terms the effects certain elements have on steel.

Fred Pickard, President of Oleson Saw Technology, has tried to work with Thompson over the years. Oleson Saw would prefer a domestic source for this steel. Mr. Pickard explained in his testimony to the TPSC on January 11, that on two occasions, in August of 1997 and November of 1997, Oleson Saw rejected steel from Thompson for a variety of reasons, including non-conformity with straightness and flatness specifications, and edge condition. The subject material was only 5.125" wide and 0.042" in gauge, which should have been relatively easy product to produce. Oleson Saw's metallurgist reviewed the results with Thompson personnel explaining why the Thompson steel could not be used for saw blades. In addition to its inability to supply the chemistry requested, Thompson was, and is, restricted in the size range it can process and polish, and cannot offer the complete range of necessary sizes. More importantly, it is the finishing process that is critical to producing band saw steel. There are very few companies worldwide that are able to make a steel suitable for manufacturing band saws--Thompson Steel is *not* one of those companies.

The steel that is used to manufacture a band saw accounts for approximately 50 percent of the cost of goods sold for that saw. Therefore, a 20% increase in the price of this steel will raise their costs by 10 percent. This steel is sold for over $3,000st, so a 20% tariff would reaise the costs by over $600 st. Currently, U.S. band saw manufacturers are being undersold by Canadian manufacturers. The band saw industry would be severely hurt by a tariff or a quota; they need a consistent and affordable supply of steel. In fact, several of the band saw manufacturers are already making contingency plans to move their businesses to Canada should this steel not be excluded. This will result in the loss of hundreds of U.S. jobs. This steel is not made in the United States, and so, should be excluded from any remedy recommendation in this case.

M. High Carbon Cold-Rolled Steel (X-142.13)

This specialized steel is used to produce fasteners and other items for the automotive industry, the electrical component industry, and furniture manufacturers. The four largest integrated mills -- LTV, U.S. Steel, Bethlehem, and National -- do not oppose this exclusion. Either Weirton or one of the minimills alleges it is able to produce this product. However, the U.S. mill has not stated its name publicly, nor has it demonstrated that it can produce high carbon cold-rolled steel to all four of the required specifications. Feroleto Steel, a U.S. purchaser of this steel, has first-hand knowledge that neither WCI, Nucor, nor Weirton can make this spheriodized annealed high carbon product. In fact, Feroleto Steel has a facility at Weirton's plant and knows that they do not make grades over SAE 1030. Weirton's website confirms this as they only sell up to C1020 cold-rolled steel.[11] In addition, Feroleto recently asked Nucor if it could supply this high carbon cold-rolled steel, but Nucor replied that it did not have the capabilities to make it. Finally, Mr. Wood spoke with WCI's salesperson, Jackie Reeves, on January 15, 2002, and confirmed that WCI will only quote as high as 1021.

The manufacturers in the Association of Cold Rolled Strip Steel Producers do not make this steel as they clearly state in their argument that they cannot make it in the wider

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[11] *See* www.weirton.com/products/cold/spec.html.

sizes.[12] Specification 1 requires a width from 36"-52". The U.S. product falls far short of meeting this specification. Also, the cold-rolled strip producers do not address all of the specifications. It is not enough that domestic mills can meet the basic requirements; they also must meet the stringent quality requirements that U.S. customers demand in order to manufacture competitive products.

Automotive manufacturers have very strict tolerances for their parts. Certain U.S. automotive parts suppliers require this steel in order to meet their own specifications. For those customers, domestically produced steel is not a viable alternative. This high-carbon cold-rolled steel must be ductile and easily formed. The Japanese mills are able to produce a product that is very soft as compared to the domestic steel. When this steel is run through the mills and formed into the final pieces, it is less likely to crack and split.

Harold Wood, President of Feroleto Steel, is a large purchaser of this steel and spoke with the TPSC on January 11, on behalf of both the Japanese and French high carbon cold-rolled steel. Some of his customers must use the imported steel to manufacture their products. Eastern Tool and Stamping, which makes steel toe caps for safety shoes, has found that the U.S. product has consistently failed impact resistance tests. Feroleto still prefers to buy American steel when it is available. However, Feroleto has never located a domestic source of high carbon cold-rolled steel that meets its customers' specifications. The larger integrated mills do not make this product, as is evidenced by the fact that they do not object to this request.

Feroleto Steel first began to source imported high carbon cold-rolled steel because its customers required a higher quality steel than was available domestically. It was in the early 1980's when Feroleto had a strong "Buy America" policy. Feroleto even approached U.S. mills and offered financial assistance to develop steel that would meet the quality, performance, and consistency specifications dictated by its customers. The U.S. mills did not pursue this offer. Despite its best efforts, Feroleto was unable to purchase the product domestically and began to buy imported steel. For all of these reasons, high carbon cold-rolled steel should be excluded from the remedy recommendation in this case.

N. Cold-Rolled Steel for Porcelain Enameling (X-142.24)

This cold-rolled steel is used by such end users as Polyvision to enamel with porcelain for use in markerboards, chalkboards, and writing walls. In the request for this investigation, the USTR requested that cold-rolled steel *with* porcelain enameling be excluded from this investigation.[13] A similar exclusion was granted in the 1999/2000 cold-rolled steel antidumping investigation (before it was terminated).[14] However, in requesting this product exclusion, the USTR omitted the part of the Commerce Department definition that stated "certain

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[12] *See* Brief filed by Adducci, Mastriani & Schaumberg, L.L.P (Dec. 7, 2001).

[13] Letter from Robert B. Zoellick, U.S. Trade Representative, to Stephan Koplan, Chairman, U.S. International Trade Commission, at Annex II (Jun. 22, 2001).

[14] *Notice of Final Determinations of Sales at Less Than Fair Value: Certain Cold-Rolled Flat-Rolled Carbon-Quality Steel Products From Argentina, Japan and Thailand*, 65 Fed. Reg. 5520, 5524 (Feb. 4, 2000).

cold-rolled steel sheet, *whether or not* coated with porcelain enameling." Omission of the phrase "whether or not" therefore limited the product exclusion to "certain cold-rolled steel sheet with porcelain enameling," which makes the substrate cold-rolled steel (before enameling) subject to this investigation. The enameled product, but not the substrate, was excluded again in the recently filed cold-rolled steel antidumping investigation.

By excluding the uncoated substrate from prior trade cases, the domestic industry recognized that this product in not made in the United States. The minimills and Weirton agree and have not opposed exclusion of the cold-rolled product from any remedy. The Association of Cold Rolled Strip Steel Producers also does not object to this exclusion. However, as with other products, one domestic integrated mill claims to produce this product, but the company's name is proprietary. Without access to this information, we cannot adequately review and respond to the domestic industry's position. In addition, the customer does not have the opportunity to pursue this mill as a possible supplier. If this mill's name is disclosed on January 16, as requested by the USTR, we will respond accordingly.

In addition, we noticed a clerical error in the definition of this product, which was submitted to the USTR on November 13. The nominal thickness was defined as ">= 0.019 inch." The thickness should be "<= 0.019 inch." Therefore, the definition of this product should be revised as indicated in **Exhibit 1**.

O. Ultra-Flat Cold-Rolled Steel (X-142.4)

Ultra flat cold-rolled steel is a tin mill black plate product that is used in the production of brake line tubing. Robert Cavalli, Vice President of Purchasing for TI Group Automotive Systems appeared before the TPSC on January 11 to urge exclusion of this product. Bundy North America – a division of TI Automotive and one of the world's leading brake line tubing manufacturers – has very specific requirements for this cold-rolled product. The characteristics defined above, particularly cleanliness (achieved through vacuum degassing) and flatness (in terms of gauge and crown), are critical to proper functioning brake line tubing. No other steel product can substitute.

The Association of Cold Rolled Strip Steel Producers, the U.S. minimills, and Weirton do not oppose this exclusion request. One domestic integrated mill claims to produce this product, but the company's name is proprietary. We expect the identity of this mill will be disclosed on January 16, as requested. In the meantime, we have developed a more specific definition of this product in hopes of securing the entire domestic industry's agreement to exclude ultra flat cold-rolled steel. Please refer to **Exhibit 1** for the revised definition.

P. High Frequency Low Core Loss NOES (X-142.6)

This steel is a unique cold-rolled steel product in that it has low core loss in the high frequency territory. Therefore, it is often used in micromotors, which are high-speed rotating parts in disc drives of notebook computers. Another application of this material is the integrated starter and generator for a hybrid electric vehicle. This newly designed steel was not

sold to the United States during the period of investigation, and so, could not possibly have caused any of the injury the domestic industry is claiming to be suffering.

The Association of Cold Rolled Strip Steel Producers, the U.S. minimills, and Weirton do not oppose this exclusion request. The integrated mills state that the definition of high frequency low core loss NOES is insufficient and therefore did not comment on the exclusion request. In response, we prepared a more specific definition that should exclude any product that is made in the United States. Please refer to **Exhibit 1** for the revised definition.

Q. Ultra High Strength Cold-Rolled Steel Sheet (X-142.8)

Ultra high strength cold-rolled steel can be used in automotive applications, such as passenger seats, bumpers, side impact beams, seat frames, center pillars and roof side rails. U.S. Steel submitted a separate letter stating that it does not oppose this exclusion request, which is attached to our November 13 submission. In addition, Toyota Motor Manufacturing North America supports this exclusion request, having submitted a letter to the ITC and USTR on November 13 urging exclusion of this product.

Other comments from the domestic mills are mixed. The Association of Cold Rolled Strip Steel Producers, the U.S. minimills, and Weirton do not oppose this exclusion request. Inland Ispat claims to produce a substitutable product, as defined in the specification ASTM A980. *See* ER-057-IspatInland.pdf at 3. Finally, the integrated mills asserted that that an insufficient definition is available publicly. However, the definition of this exclusion request has been public since our October 30, 2001, prehearing remedy brief during the ITC phase of this investigation. Nonetheless, we have responded to Ispat Inland's and the U.S. integrated mills' concerns and revised the definition. Please refer to **Exhibit 1** for the revised definition. Note that the ranges of yield point, tensile strength, and elongation are narrower than the original definition. A chemical composition of the material was also added.

There are significant differences between the ultra high strength cold-rolled steel as described in the revised definition above and ASTM A980, which Ispat Inland claims is substitutable. **Exhibit 5** to this submission compares the two definitions. First, ASTM A980 does not contain requirements for elongation, yield point, or stretch flangeability. These mechanical properties relate to formability that end users require, and are critical elements of the steel. In particular, ASTM A980 does not provide for elongation, which measures the ability of the steel to stretch, bend, and draw without cracking. Second, phosphorus and sulfur of ultra high strength cold-rolled steel are much lower than ASTM A980. Higher levels of such impurities often adversely affect strength or other mechanical properties (such as stretch flangeability) of the steel.

Ultra high strength cold-rolled steel is significantly more formable than ASTM A980. This cold-rolled steel will be used for automobile seat frames, seat tracks, and side impact beams, for example. To make these parts, the steel is deeply drawn when stamped. If the steel does not have sufficient formability, the parts might crack during forming. If the steel is weakened by cracks or high levels of impurities, the parts could fail during a collision and possibly cause injury to the passenger. Again, as we explained in our November 13 submission,

Federal Motor Vehicle Safety Standards (FMVSS #207) have minimum requirements for such parts and strength is of primary importance.

In summary, ultra high strength cold-rolled steel has several important characteristics that are not available from U.S. mills. The revised definition further distinguishes the imported product from that which is made in the United States. We will contact counsel to the domestic industry to determine their positions on this exclusion request as revised above.

R. Coated Steel for Heat-Shrinkable Bands (X-142.10)

Please reference the separate brief submitted on January 17, 2002, covering products used in parts for Sony Electronics.

S. Electro-Galvanized Alloy Steel (X-142.11)

Consumers rely on electro-galvanized boron alloy steel to produce specialty items, which require thin-gauge galvanized steel that is capable of being formed into various shapes and angles without breaking or separating. This unique steel product is not produced in the United States as evidenced by the fact that the minimills and Weirton do not oppose exclusion of this product. The integrated mills also do not claim to make electro-galvanized alloy steel, but oppose this request because they "believe" that Weirton and Wheeling-Pitt can produce it. However, Weirton itself does not object and Wheeling-Pitt has not stated its position on the exclusion request. The TPSC should assume that Weirton and Wheeling-Pitt are capable of stating their own opinions on exclusion requests and disregard the integrated mills' opposition to excluding this product. Electro-galvanized alloy steel should be excluded from any remedy because the domestic industry has expressed a lack of interest in restricting imports of this product.

T. Tin Free Steel for Inner Magnetic Shield (X-142.9)

Please reference the separate brief submitted on January 17, 2002, covering products used in parts for Sony Electronics.

U. Bearing Quality Rod and Bar (X-142.3)

Representatives of two U.S. bearing manufacturers – David Butler of NN Inc. (Ball and Roller division) and Richard Peterson of NSK Corporation – appeared before the TPSC on January 11 to urge exclusion of bearing quality rod and bar. This steel product is essential to producers of bearing and bearing components. A bearing – which is used in moving parts of cars, electric motors, and conveyors, among other things – is normally made up of four parts. The rings and rolling elements carry the load, while the cage spaces and retains the rolling elements. Bearing quality rod and bar, which is made of grade 52100 steel, is used for the rolling element and rings.

Domestic producers have taken various positions on this exclusion request:

- AK Steel, Co-Steel, and GS industries do not oppose this exclusion request.

- Timken claims to produce bearing quality rod and bar with a diameter equal to or greater than 1 7/8 inches, but it does not oppose exclusion of rod and bar below 1 7/8 inches.[15] The American Bearing Manufacturers Association, of which Timken is a prominent member, supports exclusion of bearing quality bar and rod with this diameter restriction. *See* ER-049-ABMA.pdf.

Two other producers claim to produce 52100 rod and bar, but evidence to the contrary has been provided to the Commerce Department and the TPSC.

- Republic opposes the exclusion request, but recently declined a request for quotation from Torrington, indicating that they cannot meet the required specifications. Documentation of the request and Republic's response were attached to a letter that Torrington submitted to the ITC on October 9, 2001. A copy of Torrington's letter was given to the Commerce Department on December 21, 2001; a copy was also included in the briefing packet distributed during our January 11, 2002, meeting with the TPSC concerning exclusion requests.

- AmeriSteel claims to produce this product with purchased billets. NSK Corporation sent a request for quotation, and AmeriSteel responded that it could not produce 52100 steel (noting that it is a "a commodity producer of C1018 cold drawn flats and squares").

Therefore, the only legitimate opposition to the Japanese producers' exclusion request is Timken's claim to produce 52100 bar in diameters of 1 7/8 inches and above. The Japanese producers agree to limit the definition of its exclusion request to diameters under 1 7/8 inches. Please refer to **Exhibit 1** for the revised definition.

Commissioner Devaney recommended exclusion of all ball bearing steels, including grade 52100 bar and rod. The TPSC also should recommend exclusion of this product because the domestic producers either agree to the exclusion or cannot produce the product.

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[15] Timken submitted comments to the USTR concerning various exclusion requests for bearing quality steels. Timken generally opposes such requests, but specifically limited its position to bearing quality bar and rod equal to or greater than 1 7/8 inches. *See* ER-055-Timken.PDF at 3. Therefore, the TPSC should assume that Timken does not oppose exclusion of bearing quality rod and bar below 1 7/8 inches.

V. Free-Cutting Bar and Rod Containing Lead (X-142.5)

Free-cutting refers to bar and rod that are easily workable, for such end uses as automotive fasteners. The addition of lead gives the steel this workability. Free cutting bar and rod containing lead are produced in the United States, but in insufficient quantities. Use of lead increases costs associated with state regulations that protect against harmful lead exposure. Domestic producers must choose to manufacture rod and bar products with lead, which are more costly, or other products. There is nonetheless a need for leaded bar and rod. The limited domestic availability of bar and rod with lead significantly constrains U.S. purchasers' sources of supply. Import restrictions would only worsen the situation.

The domestic industry's positions on this exclusion request are mixed. The Minimill 201 Coalition for long products does not oppose this exclusion request. Republic and Ispat Inland claim to make this product; North Star and AmeriSteel say they can make it with purchased billets. Ispat Inland also opposes the request.

In response, we first note that the domestic industry has not pursued import restrictions of free-cutting rod. This specialty product was excluded from the Steel Wire Rod 201 investigation that the domestic industry petitioned.[16] This product was also excluded from the domestic industry's petition for the current Title VII investigations of carbon and certain alloy steel wire rod.[17] Although the industry's position apparently changed, this case history suggests that import restrictions on free-cutting rod are not necessary. The bar product has not been subject to any recent trade cases.

Nonetheless, to respond to the domestic industry's opposition to this exclusion request, we offer a revised definition of the product. In particular, the additional requirement for 100 parts per million or more of oxygen enhances the machinability of the wire rod.[18] This revision should distinguish the imported product from that which is manufactured in the United States. Please refer to **Exhibit 1** for the revised definition.

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[16] *See* Proclamation No. 7273, 65 Fed. Reg. 8621 (Feb. 18, 2000), *Technical Correction to the Harmonized Tariff Schedule of the United States*, 65 Fed. Reg. 13815 (USTR Mar. 14, 2000).

[17] *Notice of Initiation of Antidumping Duty Investigations: Carbon and Certain Alloy Steel Wire Rod From Brazil, Canada, Egypt, Germany, Indonesia, Mexico, Moldova, South Africa, Trinidad and Tobago, Ukraine, and Venezuela*, 66 Fed. Reg. 50164, 50164 (Oct. 2, 2001) (noting that "free machining" rod is excluded, which is equivalent to "free-cutting" rod); *Notice of Initiation of Countervailing Duty Investigations: Carbon and Certain Alloy Steel Wire Rod From Brazil, Canada, Germany, Trinidad and Tobago, and Turkey*, 66 Fed. Reg. 49931, 49931-32 (Oct. 1, 2001).

[18] The requirement for oxygen was not added to the definition for free-cutting bar because bar products that are currently exported to the United States do not contain such higher oxygen. End uses of free-cutting bar do not require higher oxygen.

CONCLUSION

As this and our November 13 submission demonstrate, these specialized carbon and alloy flat and long products should not be subject to any remedy that may result from this case. For some products, the domestic industry does not oppose exclusion or has indicated no interest in restricting access to imports. In other cases, the domestic industry has not demonstrated sufficiently that it can provide the products that U.S. customers require. The Administration should avoid the unnecessary and foreseeable harm to consumers that will result from indiscriminate import restrictions. We urge the TPSC to recommend to the President exclusion of these products.

Respectfully submitted,

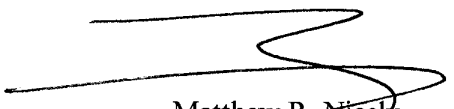

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Exhibit List

Exhibit 1: Revised Definitions

Exhibit 2: Testimony of Dan Cadotte, Grove Worldwide, Before the TPSC (January 11, 2002)

Exhibit 3: Documents Concerning High Carbon Hot-Rolled Alloy Sheet and Plate Steel for Circular Saw Blades (X-142.18, X-142.22)

Exhibit 4: Change in Position of the Association of Cold-Rolled Strip Steel Producers on Cold-Rolled Steel for Band Saws (X-142.12)

Exhibit 5: Comparison of the Exclusion Definition for Ultra High Strength Cold-Rolled Steel (X-142.8) to ASTM A980

Exhibit 1

Revised Definitions

AMENDED PRODUCT DEFINITION FOR ABRASION-RESISTANT PLATE (X-142.16)

The definition that was previously submitted for abrasion-resistant plate was:

Abrasion resistant steel plate with a Brinell hardness of 360 or greater.

Please replace this definition with the following:

1. Thickness: 4.8 - 50.8 mm
   Brinell hardness: min. 361
   Chemical Composition (% weight): Ti 0.008-0.017%; C 0.14-0.16%; Si 0.25-0.40%; Mn 1.35-1.50%, P 0.000-0.020%, S 0.000-0.010%, V 0.000-0.014%, B 0.0008-0.0015%; Sal 0.015-0.035%, and N 0.000-0.004%
   Descaling: All plates shall be descaled.
   Flatness tolerance: All plates are half of the A6 ASTM standard tolerance.

2. Thickness: 4.8 - 40.0 mm
   Brinell hardness: min. 361 max. 440
   Chemical Composition (% weight): Ti 0.010-0.017%; C 0.14-0.15%, Si 0.30-0.40%; Mn 1.14-1.24%; P 0.000-0.015%; S 0.000-0.003%; Cr 7-12%, Mo 0.11-0.15%; Nb 0.017-0.022%; B 0.0008-0.0015%; Sal 0.015-0.035%, N 0.000-0.004%
   Guaranteed Charpy: -40 centigrade; absorbed energy Min 27J
   CEQ: 19mm and under; max. 0.40%
   19.1 - 40.0mm max. 0.43%
   CEQ: Carbon Equivalent Formula = C + MN/6 + (CU+NI)/15 + (CR+MO+V)/5
   Descaling: All plates shall be descaled.
   Flatness tolerance: All plates are half of the A6 ASTM standard tolerance.

3. Thickness: 4.8 - 50.8 mm
   Brinell hardness: min. 477
   Chemical Composition (% weight): Ti 0.010-0.017%; C 0.29-0.31%; Si 0.25-0.35%; Mn 1.05-1.15%; P 0.000-0.010%; S 0.000-0.004%; Cr 0.30-0.35%; B 0.0008-0.0015%; Sal 0.015-0.035%; N 0.000-0.004%
   Descaling: All plates shall be descaled.
   Flatness tolerance: All plates are half of the A6 ASTM standard tolerance.

4. Thickness: 6.0 - 101.6 mm
   Brinell hardness: min. 361
   Chemical Composition (% weight): Ti 0.010-0.015%; C 0.14-0.16%; Si 0.20-0.30%; Mn 0.90-1.00%; P 0.000-0.015%; S 0.000-0.003%; Cr 0.60-0.65%; Mo 0.15-0.20%; V 0.035-0.045%; B 0.0008-0.0015%; Sal 0.02-0.04%; N 0.000-0.004%
   Descaling: All plates shall be descaled.
   Flatness tolerance: All plates are half of the A6 ASTM standard tolerance.

AMENDED PRODUCT DEFINITION FOR
ABRASION-RESISTANT PLATE (X-142.16)

(CONTINUED)

5. Thickness: 6.0 - 101.6 mm
Brinell hardness: min. 477
Chemical Composition (% weight): Ti 0.010-0.017%; C 0.27-0.28%; Si 0.25-0.35%; Mn 0.90-1.00%; P 0.000-0.010%; S 0.000-0.003%; Cr 0.45-0.55%; Mo 0.20-0.25%; V 0.02-0.03%; B 0.0008-0.0015%; Sal 0.015-0.035%; N 0.000-0.004%
Descaling: All plates shall be descaled.
Flatness tolerance: All plates are half of the A6 ASTM standard tolerance.

6. Plate conforms to USA Patent No. 5236521, 5284529
Thickness: 6.0 - 65.0 mm
Brinell hardness: min. 401
Chemical Composition (% weight): Ti 0.35-0.45%; C 0.29-0.31%; Si 0.30-0.40%; Mn 0.65-0.75%, P 0.000-0.010%; S 0.000-0.010%; Cr 0.80-0.90%; Mo 0.22-0.27%; B 0.0008-0.0014%; Sal 0.03-0.06%; N 0.002-0.006%
Descaling: All plates shall be descaled.
Flatness tolerance: All plates are half of the A6 ASTM standard tolerance.

7. Chemical composition: C =< 0.21%, Si =< 0.70%, Mn =< 1.60%, P =< 0.025%, S =< 0.010%, B =< 0.0030%, Pcm (Thickness =< 25mm) =< 0.30%, Pcm (Thickness > 25mm) =< 0.35%
Brinell Hardness: 360 =< HB =< 440
Descaling: All plates shall be descaled before they are water-quenched.
Tolerance: All plates are half of the A6 ASTM Standard tolerance.

8. Chemical composition: C =< 0.35%, Si =< 0.70%, Mn =< 1.60%, P =< 0.025%, S =< 0.010%, B =< 0.0030%, Pcm =< 0.42%
Brinell Hardness: 450 =< HB =< 550
Descaling: All plates shall be descaled before they are water-quenched.
Tolerance: All plates are half of the A6 ASTM Standard tolerance.

9. Thickness: 6.0 - 75.0 mm
Brinell hardness: 361 - 400
Chemical Composition (% weight): C: 0.25 max., Si: 0.55 max., Mn: 1.60 max., P: 0.025 max., S: 0.015 max., Cu: 0.25 max., N: 0.25 max., Cr: 0.15 max., Mo: 0.10 max., V: 0.030-0.100, B: 10 ppm max.
Ceq: 0.53 max
Calculating formula: Ceq = C + Si/24 + Mn/6 + Ni/40 + Cr/5 + Mo/4 + V/14 (%)

AMENDED PRODUCT DEFINITION FOR ABRASION-RESISTANT PLATE (X-142.16)

(CONTINUED)

10. Thickness: 6.0 - 75.0 mm
Brinell hardness: 401 - 440
Chemical Composition (% weight): C: 0.30 max., Si: 0.55 max., Mn: 1.60 max., P: 0.025 max., S: 0.015 max., Cu: 0.25 max., Ni: 0.25 max., Cr: 0.15 max., Mo: 0.10 max., V: 0.030 - 0.100, B: 10 ppm max.
Ceq: 0.57 max.
Calculating formula: Ceq = C + Si/24 + Mn/6 + Ni/40 + Cr/5 + Mo/4 + V/14 (%)

11. Thickness: 6.0 - 75.0 mm
Brinell hardness: 471 - 530
Chemical Composition (% weight)
C: 0.35 max., Si: 0.55 max., Mn: 1.60 max., P: 0.025 max., S: 0.015 max., Cu: 0.25 max., Ni: 0.25 max., Cr: 0.15 max., Mo: 0.10 max., V: 0.030 - 0.100, B: 10 ppm max.
Ceq: 0.63 max.
Calculating formula: Ceq = C + Si/24 + Mn/6 + Ni/40 + Cr/5 + Mo/4 + V/14 (%)

12. Thickness: 8.0 – 101.6 mm
Brinell hardness: min. 321
Chemical Composition (max. % weight): C 0.20%; Si 0.35%; Mn 1.20%; P 0.030%, S 0.030%, Cu 0.50%, Ni 1.50%, Cr 1.20%; Mo 0.60%, V 0.08% and B 0.006%
Descaling: All plates shall be descaled.
Flatness tolerance: All plates are half of the A6 ASTM standard tolerance.

13. Thickness: 8.0 – 101.6 mm
Brinell hardness: min. 340
Chemical Composition (max. % weight): C 0.20%; Si 0.35%; Mn 1.20%; P 0.030%, S 0.030%, Cu 0.50%, Ni 1.50%, Cr 1.20%; Mo 0.60%, V 0.08% and B 0.006%
Descaling: All plates shall be descaled.
Flatness tolerance: All plates are half of the A6 ASTM standard tolerance.

14. Thickness: 8.0 – 101.6 mm
Brinell hardness: min. 360
Chemical Composition (max. % weight): C 0.20%; Si 0.35%; Mn 1.20%; P 0.030%, S 0.030%, Cu 0.50%, Ni 1.50%, Cr 1.20%; Mo 0.60%, V 0.08% and B 0.006%
Descaling: All plates shall be descaled.
Flatness tolerance: All plates are half of the A6 ASTM standard tolerance.

15. Thickness: 8.0 – 63.5 mm
Brinell hardness: min. 400
Chemical Composition (max. % weight): C 0.30%; Si 0.15-0.45%; Mn 1.60%; P 0.030%, S 0.030%, Cu 0.50%, Ni 1.50%, Cr 1.20%; Mo 0.60%, V 0.08% and B 0.006%
Descaling: All plates shall be descaled.
Flatness tolerance: All plates are half of the A6 ASTM standard tolerance.

AMENDED PRODUCT DEFINITIONS FOR CERTAIN HIGH-ALLOY PLATE (X-142.17)

The definition that was previously submitted for high-alloy plate was:

High tensile alloy with tensile strength of 90ksi or greater.

Please replace this definition with the following:

High strength tensile alloy plate falling within any of the following definitions:

1. Process: TMCP = Thermo Mechanical Control Process
Thickness: 6.0 - 40.0 mm
Yield Strength: min. 685 N/mm^2
Tensile Strength: 780-890 N/mm^2
Chemical Composition (% weight): Ti 0.008-0.017%; C 0.14-0.15%; Si 0.3-0.4%; Mn 1.14-1.40%; P 0.00-0.02%; S 0.000-0.004%; Cr 0.05-0.18%; Mo 0.11-0.32%; Nb 0.017-0.023%; V 0.000-0.050%; B 0.0008-0.0015%; Sal 0.015-0.035%; N 0.000-0.004%
Formability: Bending Test -- guaranteed 1.5 times the thickness of the material for 180° bending angle
Flatness: permissible variations from flatness -- ¼·A6
TMCP plate with guaranteed charpy impact of -40
Guaranteed Charpy: -40 centigrade; absorbed energy min. 40J
Guaranteed CEQ 19mm or less, max. 0.40%; 19.1mm - 40 mm, max. 0.43%
CEQ: Carbon Equivalent Formula = C + MN/6 + (CU+NI)/15 + (CR+MO+V)/5

2. Process: TMCP (Thermo Mechanical Control Process)
Thickness: 4.5 mm-76.2 mm
Yield strength: 80-100 ksi
Tensile strength: min. 90 ksi
Welded CTOD value at -10 °C: min. 0.25 mm
Chemical Composition (% weight): C 0.12 max., Si 0.40 max., Mn 2.00 max., P 0.015 max., S 0.006 max., Nb 0.030 max., Ti 0.020 max.
Pcm 0.23 max. (Pcm = C + Mn/20 + Si/30 + Cu/20 + Ni/60 + Cr/20 + Mo/15 + V/5 + 5B)

3. Process: Double-normalized and Tempered, (meeting ASTM A353)
Yield strength: min. 75 ksi
Tensile strength: 100-120 ksi
Charpy at -195 °C, Lateral Expansion: min. 0.381 mm
Chemical Composition (% weight): C 0.13 max., Si 0.15-0.40, Mn 0.90 max., P 0.035 max., S 0.035 max., Ni 8.50-9.50

4. Process: Quenched and Tempered (ASTM A553 type I)
Yield strength: min. 85ksi
Tensile strength: 100-120 ksi
Charpy at -195 °C, Lateral Expansion: min 0.381mm
Chemical Composition (% weight): C 0.13 max., Si 0.15-0.40, Mn 0.90 max., P 0.035 max., S 0.035 max., Ni 8.50-9.50

AMENDED PRODUCT DEFINITIONS FOR CERTAIN HIGH-ALLOY PLATE (X-142.17)

(CONTINUED)

5. Quenched and tempered high tensile alloy steel plate (ASME SA517 Grade E), with tensile strength between 115ksi and 135ksi (both inclusive).
Chemical composition: C: 0.11 - 0.15%, Mn: 0.50 - 0.70%, P: 0.010% max., S: 0.020% max., Si: 0.15 - 0.35%, Cr : 1.40 - 1.60%, Mo : 0.40 - 0.50%, Ti : 0.01 - 0.03%, B : 0.001 - 0.002%
Heat treatment: All plates shall be heat treated by the material manufacture by quenching and tempering. Temperature for heat treatment shall be strictly controlled.
Thickness:
1/4 inch plate (120 inch width under): - 0 / +0.04 inch
over 1/4 - 5/8 inch plate inclusive: -0.01 / +0.026 inch
plate over 5/8 inch: per ASME SA20
Squareness: Maximum deviation of 2mm in each 1 meter of plate width.
Flatness: Shell plate (over 1/4 - 5/8 inch inclusive) 20mm max. out of flat in full length. 1/4 inch plate per ASME SA517.
Descaling: All plates shall be descaled before they are water-quenched.
Supplementary requirements:
Simulated post-weld heat treatment of mechanical test coupons.
Charpy V-notch impact test (test temperature -50F)
Drop weight tests (test temperature -50F, spec shall exhibit no-break performance)
Each order must be produced from only one heat. If more than one heat used, then each group of 8 plates must be from same heat.

6. Process: Quenched and Tempered
Thickness = 6.0 - 50.0 mm
Chemical Composition (% weight): C: 0.16 max, Si: 0.55 max, Mn: 1.20 max, P: 0.025 max, S: 0.010 max, Cu: 0.50 max, Ni: 0.25 max, Cr: 1.20 max, Mo: 0.60 max, V: 0.100 max, B: 20 ppm max
Ceq: 0.63 max. (Ceq = C + Si/24 + Mn/6 + Ni/40 + Cr/5 + Mo/4 + V/14(%))
Pcm: 0.30 max. (Pcm = C + Si/30 + Mn/20 + Cu/20 + Ni/60 + Cr/20 + Mo/15 + V/10 + 5B)
Yield Strength: 685 N/mm^2 min
Tensile Strength: 780 - 930 N/mm^2
Elongation: Thickness = 6.0 - 16.0 mm: 16% min (Test Specimen: JIS No. 5)
Thickness = 17.0 - 50.0 mm: 24% min (Test Specimen: JIS No. 5)
Bending Test: Thickness = 6.0 - 32.0 mm: Bending Radius 1.5 t
Thickness = 33.0 - 50.0 mm: Bending Radius 2.0 t
Charpy V-notch Impact Test (Test Specimen: JIS No. 4):
Thickness = 12.0-20.0 mm, Test Temp. = -5° C: absorbed energy Min 47J
Thickness = 20.0-32.0 mm, Test Temp.= -15 ° C: absorbed energy Min 47J
Thickness = 33.0-50.0 mm, Test Temp.= -20 ° C: absorbed energy Min 47J

AMENDED PRODUCT DEFINITIONS FOR CERTAIN HIGH-ALLOY PLATE (X-142.17)

(CONTINUED)

7. Process: Quenched and Tempered
Thickness = 51.0 - 100.0 mm
Chemical Composition (% weight): C: 0.18 max., Si: 0.55 max., Mn: 1.20 max., P: 0.025 max., S: 0.010 max., Cu: 0.50 max., Ni: 0.25 max., Cr: 1.20 max., Mo: 0.60 max., V: 0.100 max., B: 20 ppm max.
Ceq: 0.63 max. (Ceq = C + Si/24 + Mn/6 + Ni/40 + Cr/5 + Mo/4 + V/14(%))
Pcm: 0.32 max. (Pcm = C + Si/30 + Mn/20 + Cu/20 + Ni/60 + Cr/20 + Mo/15 + V/10 + 5B)
Yield Strength: 665 N/mm^2 min
Tensile Strength: 760 - 910 N/mm^2
Elongation: 16% min (Test Specimen: JIS No. 4)
Bending Test: Bending Radius 2.0 t
Thickness = Test Temp. = - 20 °C: absorbed energy Min 47J

8. Process: Quenched and Tempered
Quenching Temperature 900 °C min.
Tempering Temperature 620 °C min.:
Thickness: 5.99 - 32.0 mm
Yield Strength: min. 690 Mpa/mm^2
Tensile Strength: 760-895 Mpa/mm^2
Chemical Composition (% weight): Ti 0.01-0.03%; C 0.12-0.21%; Si 0.20-0.35%; Mn 0.70-1.00%; P 0.00-0.035%; S .000-0.035%; Cr 0.40-0.65%; Mo 0.15-0.25%; V 0.03-0.08%; B 0.0005-0.005%;
Elongation: 18% min (Test Specimen: GL 2 in)
Reduction of Area: 40% min (Test Method A370, 40 mm wide specimen)
Brinell Hardness Number: Thickness = 5.99 – 20.0 mm: 235-293
Flatness: Half of ASTM A6

9. Process: Quenched and Tempered
Quenching Temperature 900 °C min.
Tempering Temperature 620 °C min.:
Thickness: 5.99 – 63.5 mm
Yield Strength: min. 690 Mpa/mm^2
Tensile Strength: 760-895 Mpa/mm^2
Chemical Composition (% weight): C 0.10-0.20%; Si 0.15-0.35%; Mn 0.60-1.00%; P 0.00-0.035%; S 0.000-0.035%; Ni 0.70-1.00%; Cr 0.40-0.65%; Mo 0.40-0.60%; V 0.03-0.08%; Cu 0.15-0.50%; B 0.0005-0.006%;
Elongation: 18% min (Test Specimen: GL 2 in)
Reduction of Area: 40% min (Test Method A370, 40 mm wide specimen)
Brinell Hardness Number: Thickness = 5.99 – 20.0 mm: 235-293
Flatness: Half of ASTM A6

AMENDED PRODUCT DEFINITIONS FOR CERTAIN HIGH-ALLOY PLATE (X-142.17)

(CONTINUED)

10. Process: Quenched and Tempered
Quenching Temperature 900 ° C min.
Tempering Temperature 620 ° C min.:
Thickness: 5.99 – 50.8 mm
Yield Strength: min. 690 Mpa/mm^2
Tensile Strength: 760-895 Mpa/mm^2
Chemical Composition (% weight): C 0.12-0.21%; Si 0.20-0.35%; Mn 0.95-1.30%; P .00-0.035%; S .000-0.035%; Ni 0.30-0.70%; Cr 0.40-0.65%; Mo 0.20-0.30%; V 0.03-0.08%; Cu 0.15-0.50%; B 0.0005-0.005%;
Elongation: 18% min (Test Specimen: GL 2 in)
Reduction of Area: 40% min (Test Method A370, 40 mm wide specimen)
Brinell Hardness Number: Thickness = 5.99 – 20.0 mm: 235-293
Flatness: Half of ASTM A6

11. Process: Quenched and Tempered
Quenching Temperature 900 ° C min.
Tempering Temperature 620 ° C min.
Thickness: 5.99 – 152.4 mm
Yield Strength: Thickness = 5.99 – 65.0 mm; min. 690 Mpa/mm^2
Thickness = 65.0 mm over; min. 620 Mpa/mm^2
Tensile Strength: Thickness = 5.99 – 65.0 mm 760-895 Mpa/mm^2
Thickness = 65.0 mm over; 690-895 Mpa/mm^2
Chemical Composition (% weight): C 0.14-0.21%; Si 0.15-0.35%; Mn 0.95-1.30%; P 0.00-0.035%; S 0.000-0.035%; Ni 1.20-1.50%; Cr 1.00-1.50%; Mo 0.45-0.60%; V 0.03-0.08%;
Elongation: Thickness = 5.99 – 65.0 mm 18% min (Test Specimen: GL 2 in)
Thickness = 65.0 mm over 16% min (Test Specimen: GL 2 in)
Reduction of Area:
Thickness = 5.99 – 65.0 mm; 40% min (Test Method A370, 40 mm wide specimen)
Thickness = 65.0 mm over 12.5% min (Test Method A370, 12.5 mm wide specimen)
Brinell Hardness Number: Thickness = 5.99 – 20.0 mm: 235-293
Flatness: Half of ASTM A6

AMENDED PRODUCT DEFINITIONS FOR HIGH-CARBON HOT-ROLLED ALLOY STEEL (X-142.22, X-142.18)

On November 13, 2001, the following definition was submitted for high-carbon hot-rolled alloy steel sheet and plate:

> High-carbon hot-rolled alloy steel is made to specifications SAE 8670 modified, SAE 4130, SAE 4135 (modified), SAE 8660, SAE4130 (modified) JIS SCM 435.

On December 14, 2001, the following revised definition was submitted:

> High-carbon hot-rolled alloy steel made to the following specifications:

- JIS SCM 435
- SAE 4130 (modified): (unit: % Weight, Ladle Analysis)

  Type 1
  C: 0.23-0.33, Mn: 0.60-0.90, Si: 0.15-0.35, P: max. 0.030, S: max. 0.040, Cr: 0.80-1.10, Mo: 0.15-0.25
  Type 2
  C: 0.23-0.33, Mn: 0.40-0.60, Si: 0.15-0.35, P: max. 0.030, S: max. 0.040, Cr: 0.80-1.10, Mo: 0.15-0.25
  Hardness: 90kg max.

- SAE 4135 (modified): (unit: % Weight, Ladle Analysis)

  C: 0.33 - 0.38, Mn: 0.60 - 0.90, Si: 0.15 - 0.30, P: max. 0.030, S: max. 0.030, Cr: 0.90 - 1.25, Ni: 0.70 - 1.00, Mo: 0.15 - 0.25

- SAE 8660 and SAE 8660 (modified): (unit: % Weight, Ladle Analysis)
  SAE 8660 (modified): C: 0.61-0.72 (0.56-0.64), Mn: 0.30-0.50 (0.75-1.00), Ni: 0.60-0.90 (0.40-0.70), Mo: 0.10-0.15 (0.15-0.25)

- SAE 8670 (modified): C: 0.65%-0.75%

AMENDED PRODUCT DEFINITIONS FOR HIGH-CARBON HOT-ROLLED ALLOY STEEL (X-142.22, X-142.18)

(CONTINUED)

Please replace the most recent definition with the following:

High-carbon hot-rolled alloy steel, with widths greater than 36" and made to any of the following specifications:

- JIS SCM 435

- SAE 4130 (modified): (unit: % Weight, Ladle Analysis)

  Type 1
  C: 0.23-0.33, Mn: 0.60-0.90, Si: 0.15-0.35, P: max. 0.030, S: max. 0.040, Cr: 0.80-1.10, Mo: 0.15-0.25
  Type 2
  C: 0.23-0.33, Mn: 0.40-0.60, Si: 0.15-0.35, P: max. 0.030, S: max. 0.040, Cr: 0.80-1.10, Mo: 0.15-0.25
  Hardness: 90kg max.

- SAE 4135 (modified): (unit: % Weight, Ladle Analysis)

  C: 0.33 - 0.38, Mn: 0.60 - 0.90, Si: 0.15 - 0.30, P: max. 0.030, S: max. 0.030, Cr: 0.90 - 1.25, Mo: 0.15 - 0.25

- SAE 8660 and SAE 8660 (modified): (unit: % Weight, Ladle Analysis)
  SAE 8660: C: 0.56-0.64, Mn: 0.75-1.00, Ni: 0.40-0.70, Mo: 0.15-0.25
  SAE 8660 (modified): C: 0.61-0.72, Mn: 0.30-0.50, Ni: 0.60-0.90, Mo: 0.10-0.15

- SAE 8670 (modified): C: 0.67%-0.75%, Mn: 0.40-0.60, Si: 0.20-0.35, P: 0.035 max., S: 0.035 max., Cr: 0.20-0.50, Ni: 0.70-1.00, Mo: 0.11-0.15

AMENDED PRODUCT DEFINITIONS FOR HOT-ROLLED ALLOY SHEET (X-142.14)

The definition that was previously submitted for hot-rolled alloy sheet:

> Certain hot-rolled steel of great hardness, heat-resistance and abrasion-resistance made to specification ASTM A607 GR55 modified, for further processing into OCTG pipe products, with chemical composition of (a) Ni: 0.10% max, (b) Cr: 0.55-0.75%, (c) Mo: 0.106-0.15%, (d) Cb: 0.02% min. or V: 0.04% min.

Please replace this definition with the following:

> Certain hot-rolled steel made to very clean internal cleanliness level and purchased to specification ASTM A1011 (modified), with a modified chemical composition of: Cr 0.55-0.75%, Mo 0.106-0.15%, C 0.13-0.17%, S 0.005 % max., P 0.025% max.; and in gauges (thickness) 0.061 - 0.148". Clean steel practice with calcium refinement. Half gauge tolerance. Size of the coil: 800-1000 PIW with no more than 10% of the coils between 500-800 PIW.

AMENDED PRODUCT DEFINITIONS FOR COLD-ROLLED STEEL FOR PORCELAIN ENAMELING (X-142.24)

The definition that was previously submitted for cold-rolled steel for porcelain enameling:

> Certain cold-rolled steel sheet, whether coated or not coated which porcelain enameling prior to importation, which meets the following characteristics: Thickness (nominal) >= 0.019 inch; Width: 35 to 60 inches; chemical composition: C (max weight 0.004%), O (min weight 0.010%), B (min weight 0.012%)

Please replace this definition with the following:

> Certain cold-rolled steel sheet, whether coated or not coated which porcelain enameling prior to importation, which meets the following characteristics: Thickness (nominal) <= 0.019 inch; Width: 35 to 60 inches; chemical composition: C (max weight 0.004%), O (min weight 0.010%), B (min weight 0.012%)

AMENDED PRODUCT DEFINITIONS FOR ULTRA FLAT COLD-ROLLED STEEL (X-142.4)

The definition that was previously submitted for ultra flat cold-rolled steel:

> Coiled tin mill black plate for automotive brakeline tubing, per ASTM A625 specification, vacuum degassed, with the following ladle analysis: 0.02-0.05% carbon, 0.18-0.45% (aim 0.30%) manganese, 0.015% maximum phosphorus, 0.025% maximum sulfur, 0.10% maximum copper, and 0.020-0.075% aluminum. The gauge is 0.0136 inch, with centerline gauge tolerance of 0.0003 inch and within-coil variation not to exceed 0.0004 inch total and the crown of the coil shall not exceed .0004 inch when measured along any straight line across the width of the coil. Other physical characteristics are as follows: T1 or T3 temper, 52-62 Rockwell for T3 or 45-52 for T1, continuously annealed (for T3 only), 25-65 microinch Ra profilometer range; matte surface finish; camber per ASTM A625 (aiming 1/2 standard tolerance); slit edge minus 0, +1/8 maximum, and edge burr 0.002 inch maximum.

Please replace this definition with the following:

> 1. Coiled tin mill black plate per ASTM A625 specification, vacuum degassed, with the following ladle analysis:
> 0.02-0.05% carbon, 0.18-0.45% (aim 0.30%) manganese, 0.015% maximum phosphorus, 0.025% maximum sulfur, 0.10% maximum copper, and 0.020-0.075% aluminum. The gauge is 0.0136 inch, with centerline gauge tolerance of 0.0003 inch and within-coil variation not to exceed 0.0004 inch total and the crown of the coil shall not exceed 0.0002 inch when measured along any straight line across the width of the coil. Other physical characteristics are as follows: T1 or T3 temper, 52-62 Rockwell for T3 or 45-52 for T1, batch annealed for T1, 25-65 microinch Ra profilometer range; matte surface finish; camber per ASTM A625 (aiming 1/2 standard tolerance); slit edge minus 0, +1/8 maximum, and edge burr 0.002 inch maximum.
>
> 2. Coiled tin mill black plate per ASTM A625 specification, vacuum degassed, with the following ladle analysis:
> 0.02-0.05% carbon, 0.18-0.45% (aim 0.30%) manganese, 0.015% maximum phosphorus, 0.025% maximum sulfur, 0.10% maximum copper, and 0.020-0.075% aluminum. The gauge is 0.0136 inch, with centerline gauge tolerance of 0.0003 inch and within-coil variation not to exceed 0.0004 inch total and the crown of the coil shall not exceed 0.0002 inch when measured along any straight line across the width of the coil. Other physical characteristics are as follows: T1 or T3 temper, 52-62 Rockwell for T3 or 45-52 for T1, continuously annealed for T3, 25-65 microinch Ra profilometer range; matte surface finish; camber per ASTM A625 (aiming 1/2 standard tolerance); slit edge minus 0, +1/8 maximum, and edge burr 0.002 inch maximum.

AMENDED PRODUCT DEFINITIONS FOR HIGH FREQUENCY LOW CORE LOSS NOES (X-142.6)

The definition that was previously submitted for high frequency low core loss NOES:

> Non grain-oriented silicon steel with nominal thickness 0.2 mm (0.0080 in.), which can achieve low core loss less than 8.16 watts per pound at 400 Hz.

Please replace this definition with the following:

> Non grain-oriented silicon steel with nominal thickness 0.2 mm (0.0080 in.); minimum lamination factor = 93.0%; electrical properties:
>
> 1. Maximum core loss = 12.0 watts per kilogram at 400 Hz and 1.0 T (5.44 watts per pound at 400 Hz and 1.0T), minimum magnetic flux density = 1.62T at 5000 A/m, assumed density = 7.6 kg/dm^3.
>
> 2. Maximum core loss = 15.0 watts per kilogram at 400 Hz and 1.0 T (6.80 watts per pound at 400 Hz and 1.0 T), minimum magnetic flux density = 1.63 at 5000 A/m, assumed density = 7.65 kg/dm^3.
>
> 3. Maximum core loss = 18.0 watts per kilogram at 400 Hz and 1.0 T (8.16 watts per pound at 400 Hz and 1.0T), minimum magnetic flux density = 1.65 at 5000 A/m, assumed density = 7.70 kg/dm^3.
>
> The values are to be measured in accordance with JIS C 2550 (1992) on the samples of half the strip sheared parallel and half sheared transverse to the rolling direction.

AMENDED PRODUCT DEFINITIONS FOR ULTRA HIGH STRENGTH COLD-ROLLED STEEL (X-142.8)

The definition that was previously submitted for ultra high strength cold-rolled steel:

THICKNESS		YP						TS	EL									
		0.6=<T<0.8		0.8=<T<1.0		1.0=<T=<2.3			0.6=<T<0.8		0.8=<T<1.0		1.0=<T<1.2		1.2=<T<1.6		1.6=<T=<2.3	
(min)	(max)	(min)	(max)	(min)	(max)	(min)	(max)	(min)	(min)	(max)	(min)	(max)	(min)	(max)	(min)	(max)	(min)	(max)
0.60	2.30	430	580	420	570	410	560	590	17	32	17	32	18	33	18	33	18	-
0.60	2.30	325	470	315	460	305	450	590	17	32	18	33	19	34	20	35	21	-
0.60	2.30	420	645	410	635	400	625	780	12	25	13	26	14	27	15	28	16	-
0.80	2.30	-	-	590	930	580	920	980	-	-	9	20	10	21	11	22	12	-
0.80	2.30	-	-	835	1225	825	1215	1180	-	-	5	10	6	17	7	18	8	-
1.00	2.00	-	-	-	-	980	1270	1270	-	-	-	-	6	17	6	17	6	-
1.00	2.00	-	-	-	-	1040	1500	1470	-	-	-	-	3	15	3	15	3	-

YP: Yield Point
TS: Tensile Strength
EL: Elongation

UNIT: Thickness = mm, YP and TS = N/mm, EL = %

AMENDED PRODUCT DEFINITIONS FOR ULTRA HIGH STRENGTH COLD-ROLLED STEEL (X-142.8)

(CONTINUED)

Please replace this definition with the following:

Thickness (mm)		Yield Point (N/mm2)						Tensile Strength (N/mm2)		Elongation (%)										Stretch Flange-ability (%)	Chemical Composition (mass %)					
		0.6=<T<0.8		0.8=<T<1.0		1.0=<T=<2.3				0.6=<T<0.8		0.8=<T<1.0		1.0=<T<1.2		1.2=<T<1.6		1.6=<T=<2.3			(max)					(min)
(min)	(max)	(min)	(max)	(min)	(max)	(min)	(max)	(min)	(max)	(min)	(max)	(min)	(max)	(min)	(max)	(min)	(max)	(min)	(max)	(min)	C	Si	Mn	P	S	Al
0.60	2.30	430	560	420	560	410	560	590	-	18	32	18	32	20	33	20	33	22	-	-	0.10	0.03	2.20	0.015	0.010	-
0.60	2.30	325	470	315	460	305	450	590	-	19	32	20	33	21	34	22	35	24	-	-	0.08	0.70	1.40	0.015	0.010	-
0.60	2.30	420	645	410	635	400	625	780	-	14	25	15	26	16	27	17	28	18	-	-	0.10	0.80	1.80	0.015	0.010	-
0.80	2.30	-	-	700	850	690	850	980	1080	-	-	11	20	12	21	13	22	13	-	30	0.19	1.60	2.20	0.020	0.010	-
0.80	2.30	-	-	590	730	580	730	980	1060	-	-	13	20	14	21	14	22	14	-	-	0.19	1.60	2.20	0.020	0.010	-
0.80	2.30	-	-	835	1225	825	1215	1180	-	-	-	5	10	6	17	7	18	8	-	-	0.15	0.80	2.00	0.010	0.010	-
1.00	2.00	-	-	-	-	980	1270	1270	-	-	-	-	-	6	17	6	17	6	-	-	0.15	0.80	2.00	0.010	0.010	-
1.00	2.00	-	-	-	-	1040	1500	1470	-	-	-	-	-	3	15	3	15	3	-	-	0.21	0.60	2.00	0.010	0.010	-

AMENDED PRODUCT DEFINITIONS FOR BEARING QUALITY BAR AND ROD (X-142.3)

The definition that was previously submitted for bearing quality bar and rod:

> Bearing quality steel is wire rod and bar meeting SAE/AISI grade 52100 or JIS SUJ2 specifications or equivalent.

Please replace this definition with the following:

> Bearing quality steel wire rod and bar meeting SAE/AISI grade 52100 or JIS SUJ2 specifications or equivalent with a diameter under 1 7/8 inches.

AMENDED PRODUCT DEFINITIONS FOR FREE-CUTTING BAR AND ROD CONTAINING LEAD (X-142.5)

The definition that was previously submitted for free-cutting bar and rod containing lead:

> Free-cutting steel wire rod and bar containing 0.10% or more lead

Please replace this definition with the following:

> Free-cutting steel wire rod containing 0.10% or more lead and 100 ppm or more oxygen; free-cutting bar containing 0.10% or more lead.

Exhibit 2

Testimony of Dan Cadotte, Grove Worldwide Before the TPSC (January 11, 2002)

Statement of Dan Cadotte

Chief Materials Engineer, Grove Worldwide

Good morning, my name is Dan Cadotte and I am the Chief Materials Engineer for Grove Worldwide Inc. My primary function at Grove is to maintain a material strategy that reinforces our position as the global leader in the Mobile Hydraulic Crane Industry. I am here to speak with you today regarding our exclusion request for high strength alloy structural plate from Japan. I have a Bachelor of Science degree in Welding Engineering and have been involved in the steel industry since the mid 1980's.

Grove purchases NKK's Hi-Ten 780LE high strength plate. The crane industry is the largest consumer of this type of plate. We do not understand why the domestic industry is objecting to our request nor their reluctance to recognize and meet the specific needs of our industry. To our knowledge, this product is not nor has it ever been produced in the United States. This product is classified as 100 ksi minimum yield structural plate produced using a Thermo-Mechanical Controlled Rolling Process (a.k.a. as Control-Rolled). 100 ksi minimum yield structural steel constitutes over 65% of the steel used in our cranes. Because this plate is controlled-rolled, it is a very different type of plate than the alternative quenched and tempered high strength plate, produced domestically.

I have brought along some pictures which illustrate quality problems experienced with domestically produced quenched and tempered plate. Multiple occurrences of this nature caused us to terminate a long relationship with our domestic supplier. The flatness and surface quality of controlled-rolled plate is superior to the quenched and tempered plate produced by the domestic industry.

First, the flatness of the controlled-rolled plate is superior to the domestic quenched and tempered plate. The quench and tempering process results in unacceptable distortion. The plate levelers at the three U.S. mills that produce Q&T plate are not capable of obtaining the same flatness as that achieved from plate manufactured by the control rolled process.

Finally, the surface finish of quenched and tempered plate is inferior because of the tenacious heavy mill scale left on the surface of the steel. Grove expends tremendous non-value added time and resources removing mill scale from parts made from Q&T plate. Controlled roll product does not have mill scale.

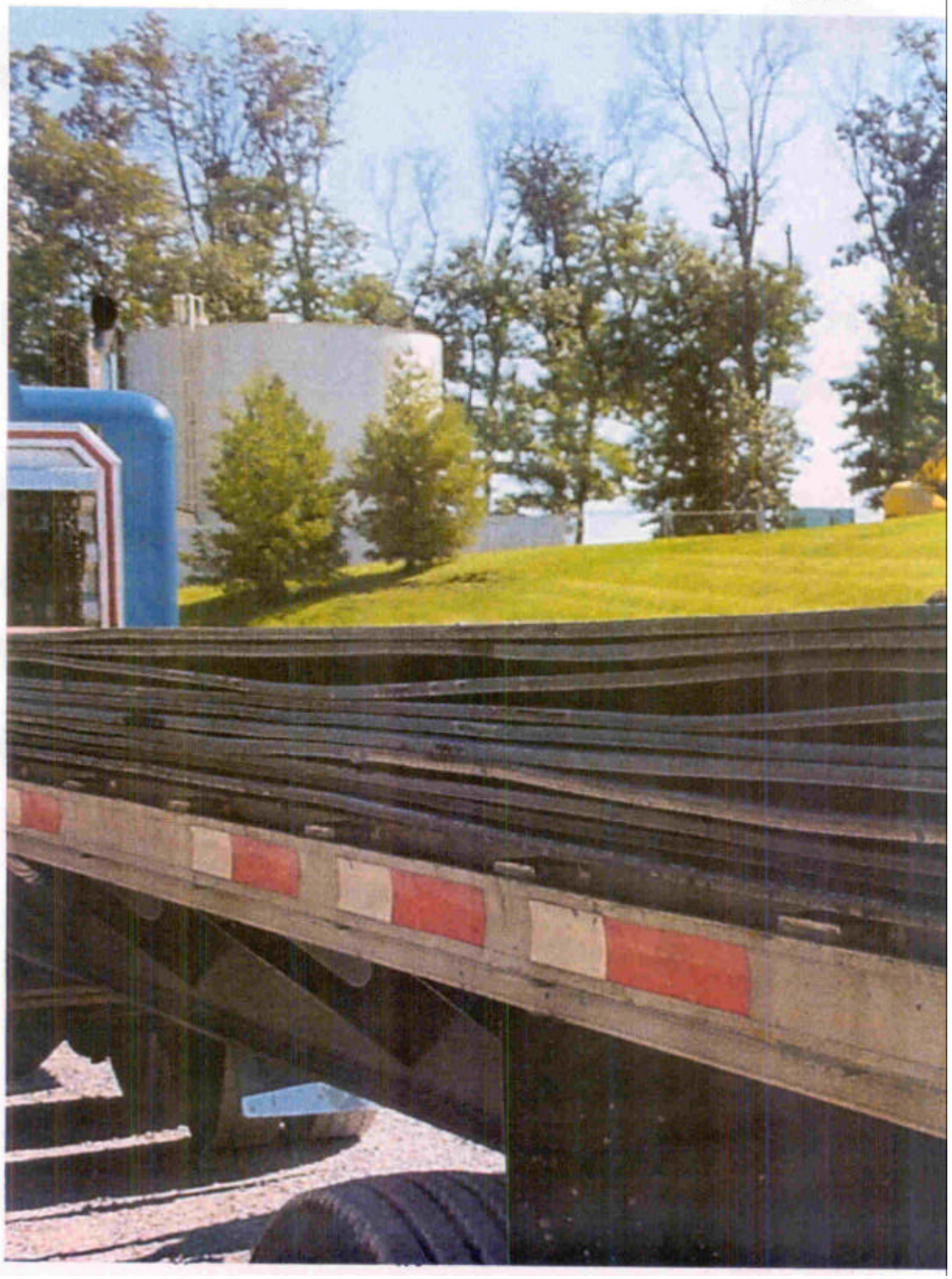
Unfortunately, within the last fourteen months we asked Beth Lukens, our primary domestic supplier, for the last 20 years to provide us "surface critical" plate – i.e., plate that has been blasted, to removed mill scale, and inspected. At the time Grove was willing to pay more for this additional process. Quite frankly they refused to quote Grove on this product, and we were forced to purchase foreign steel. The superior aspects of controlled-rolled plate -- its flatness and surface finish -- result in a plate that is materially different from plate that has been quenched and tempered.

Any tariff would obviously increase our cost of goods sold and diminish our position as a Global Leader in the industry. Times have changed, we no longer dictate the selling price of our cranes due to fierce competition in this industry -- both domestic competition and foreign. A quota would similarly hurt our position. We need to have a reliable supply of this plate in the future. If the quota of this high strength plate was consumed by companies other than Grove, and was not available we would have to change our manufacturing processes to accept plate of lesser quality. If material costs increase, as a result of tariffs, it would prevent Grove from creating new jobs and in some cases would force us to consider moving some manufacturing to sources outside the U.S.

In closing, over the years Grove has prided itself on sourcing steel domestically. Unfortunately, that is no longer the case. Grove would welcome any domestic source capable of supplying us with the control rolled steel meeting the specifications in this request.

Thank you for your time and I will be pleased to answer any questions you might have.

PUBLIC DOCUMENT




28

Exhibit 3

Documents Concerning High Carbon Hot-Rolled Alloy Sheet and Plate Steel for Circular Saw Blades (X-142.18, X-142.22)

PUBLIC
DOCUMENT

GEORGE V. VOINOVICH
OHIO

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senator_voinovich@voinovich.senate.gov
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United States Senate

WASHINGTON, DC 20510-3504

GOVERNMENTAL AFFAIRS
RANKING MEMBER, SUBCOMMITTEE ON OVERSIGHT OF GOVERNMENT MANAGEMENT, RESTRUCTURING AND THE DISTRICT OF COLUMBIA

ENVIRONMENT AND PUBLIC WORKS
RANKING MEMBER,
SUBCOMMITTEE ON CLEAN AIR, WETLANDS, AND CLIMATE CHANGE

ETHICS

January 11, 2001

Ambassador Robert Zoellick
U.S. Trade Representative
600 17th Street, NW
Washington, DC 20508

Dear Ambassador Zoellick:

I am writing to bring your attention to an exclusion request for high-carbon hot-rolled alloy sheet steel, which Peerless Saw currently imports from Germany and Japan, in regard to the pending Section 201 action.

Peerless Saw, which employs 57 individuals in Groveport, Ohio, uses hot-rolled alloy sheet steel for the manufacture of saw blades. It is my understanding that currently there are no domestic producers who are able to produce this type of steel at the quality and size levels needed to meet Peerless' specifications. Therefore, the company is completely dependent on overseas manufacturers for it supply of this important componet.

Since no domestic source exists for this type of high-carbon hot-rolled alloy sheet steel, placing import restrictions such as quotas or tariffs on it could hurt Peerless' ability to be competitive in the saw blade industry while providing virtually no benefit to the domestic steel industry. Additionally, because Peerless is already experiencing tough competition from Canadian saw blade producers, such action could actually jeopardize the continued operations of the company. Therefore, I urge you to give every due consideration to this exclusion request to avoid unnecessary and unintended consequences of the 201 investigation.

Thank you very much for your attention to this matter. I look forward to continuing to work with you on the steel issue and other important trade matters as they arise.

Sincerely,

George V. Voinovich

George V. Voinovich
United States Senator

cc: Honorable Stephen Koplan, Chairman, U.S. International Trade Commission

STATE OFFICES:
36 EAST SEVENTH STREET
ROOM 2615
CINCINNATI, OHIO 45202
(513) 684-3265

1240 EAST NINTH STREET
ROOM 2955
CLEVELAND, OHIO 44199
(216) 522-7095

37 WEST BROAD STREET
ROOM 320 (CASEWORK)
COLUMBUS, OHIO 43215
(614) 469-6774

37 WEST BROAD STREET
ROOM 310
COLUMBUS, OHIO 43215
(614) 469-6697

420 MADISON AVENUE
ROOM 1210
TOLEDO, OHIO 43604
(419) 259-3895

PUBLIC
DOCUMENT

ATTN STEVE SEGL
chairman 2
JGTowle 9/5/97

May 6,1997

CC yw
ADW
for
SLI

C.A. Warholyk-W.C.I.

SUBJECT: Peerless HRPO Spheranneal 0186-5 Alloy
Warping after heat treat and quench.

Peerless floor people have recently been complaining that Liberty-WCI material has been giving them trouble by coming out of their heat treat and quench operation in a warped condition as opposed to Okura material which comes out flat. They do experience some warping on circular blade stock laser cut prior to heat treating but the warpage manifests itself to the largest degree when they heat and quench the large 25.5" x 25.5" rectangles.

To eliminate any subjective speculation or evaluation of this problem, I asked Peerless to run the run the following experiment: Run Okura and WCI material through the same heat treat and quench cycle alternating each vendors blanks. The out come was that all WCI blanks warped but none of the Okura did.

We used .145" x 25.5" x 25.5" blanks. Liberty-WCI material was from Lib tag J1876-WCI lift no. I740101-1,heat 2115103 (see attached invoice) and Okura was from material on attached Okura inspection certificate.

SAMPLES to WCI-One Lib-WCI before and one after heat treat and quench.
One Okura before and after heat treat and quench.

Additional Comments-

1.) Peerless ran harness on heat treated blanks. On Okura blanks they got Rc 58/59 on one surface and Rc 60 on the other. On Liberty-WCI blanks they got Rc 43/47 on one surface and Rc 59 on the other. They were not sure if the difference in surface hardness on the Lib-WCI blanks were true differences or if the warpage distorted the hardnesses.

2.) Peerless said they can get Lib-WCI flatness almost as good as Okura but it takes two (2) cycles of heat and quench as opposed to one (1) for Okura.

Liberty-WCI was originally a 100% supplier. Okura has come on stream within the last year due to delivery and pricing. Their quality and performance has been quite good. Peerless wants to do business locally; however problems such as the warping make it difficult.

We must solve this warping problem in a timely manner or be faced with further loss of business.

We need your help.

Thank you,

James G Towle

(1)

WCI STEEL **DEPARTMENTAL CORRESPONDENCE**

SUBJECT: Liberty "Shape"
CAW-7358 & 7358-1 File 755058 S-254

DATE: June 18, 1997

TO:
L. L. Hawkins
Claims Supervisor

NO.:

To: J. G. Tomochek, Liberty
"Please note that this report contains confidential and proprietary information."

cc: ERC, PTK, BJM, DHE, DEM, ASL, MRR, KRB, IRC, GMT, PJT, WLC, JMS, RAD, CAW, KFC, JKG, JMB, GVS, MTD, RLC, File

Liberty's customer, Peerless Saw, complained that WCI's material after heat treating goes out of flat. The competitor's material, Okura (NKK) is flat after heat treating. Peerless Saw reports the out of flat condition refers to a warpage problem. Peerless stated that they do experience some warpage on the circular blanks which have been laser cut prior to heat treating but the warpage manifests itself to the largest degree after heat and quench( ) Each blank is handled identically. In order to eliminate subjective speculation or evaluation of this problem, Peerless ran one blank of Okura material followed by one blank of WCI material through the same heat treatment and then quenched the material while alternating the blanks by supplier. The results showed the WCI material to warp while the Okura material did not warp. Additional comments, from Liberty, stated that Peerless ran hardness tests on the heat treated blanks and found a differential hardness on the WCI samples. The Okura samples were Rc 58/59 on one surface and Rc 60 on the other. The WCI samples checked Rc 43/47 on one side and Rc 59 on the other. Peerless' personnel finally stated that the Liberty/WCI material flatness will be almost as good as the Okura material, but it takes two (2) cycles of heat and quench as opposed to one (1) cycle for the Okura material. The Liberty/WCI material has been the 100 percent supplier to Peerless. Okura has come on stream within the last year due to WCI's delivery and pricing. Okura's quality and performance has been quite good. Peerless wants to do business locally, however, problems such as warpage make it difficult. The warpage problem must be solved in a timely manner or WCI faces further loss of business at this account. Four flat samples, S-254, representing the Okura and WCI material (I7404-01-1, heat 2115103) both before and after heat treatment have been submitted for evaluation. Note that a followup report, CAW-7358-1, was submitted stating that coil B7961-02-1 did perform without problems. This coil was from heat 2127434. A sample from this acceptable coil was not returned to the mill, however the mill has been requested to research the history of this coil and comment as compared to the poor performing coil listed above. The results of this investigation are as follows.

Chemistry:	C	Mn	P	S	Si	Al	Cu	Ni	Cr	Mo	Sn	Cb	Ca	V	N_2	Surf N_2	Sample
S254-1	.63	.44	.018	.004	.24	.035	.01	.71	.44	.12	.01	—	—	.011	.0098	.0229	Okura B/4
S254-2	.63	.42	.015	.002	.22	.037	.02	.72	.42	.09	.01	—	.002	.003	.0162	.0266	WCI B/4
S254-3	.62	.42	.018	.004	.25	.037	.01	.71	.44	.12	.01	.001	----	.011	.0097	.0256	Okura After
S254-4	.64	.42	.015	.002	.22	.037	.02	.72	.42	.09	.01	.001	.002	003	.0100	.0209	WCI After

Microstructure: Steel quality was good for both the Okura and WCI material. The Okura steel did exhibit long thin sulfide stringers at the mid-thickness location. The before heat treat structures for both materials showed a good spheroidized structure with both the Okura and WCI material being very similar. The after heat treated structures were both martensitic with no discernible differences between the two material suppliers.

Gauge & Hardness:	Gauge	Top	Bottom	Rockwell	Sample
S254-1	.153"	92	92	"B" Scale	Okura B/4
S254-2	.151"	91	91	"B" Scale	WCI B/4
S254-3	.154"	59	61	"C" Scale	Okura After
S254-4	.150"	61	60	"C" Scale	WCI After
S254-4	(Additional Test Sample)	55/60	57/59	"C" Scale	WCI After

The above results do not reveal the material problem which would be cause for the warpage after the customer's heat treatment. The comments regarding the customer's findings that a differential hardness from surface to surface on the WCI material was not confirmed on the returned samples. The processing history of the WCI coil, B7961-02-1, reported as being acceptable did not show any significant processing differences from the coils reported as having the warpage condition. However, note that the ordered gauge of coil B7961-02 was ordered to a lighter gauge, .125" min, as compared to the ordered gauge of the problem coils being .145" nom gauge. Again, note that a sample of the good WCI material from coil B7961-02 was not submitted for evaluation. Based on the above results, the reason for the material warpage on the hot rolled .145" gauge WCI product could not be identified. The mill will continue to offer its' technical assistance in solving this problem should additional information or samples be available in the future.

David L. Moore
Supv Product Development
Met. Services

Exhibit 4

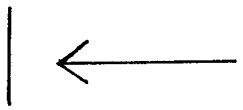
Change in Position of the Association of Cold-Rolled Strip Steel Producers on Cold-Rolled Steel for Band Saws(X-142.12)

Owens, Carrie

From: Mark Leventhal [Leventhal@ADDUCI.com]
Sent: Friday, December 28, 2001 12:29 PM
To: 'Owens, Carrie'
Cc: STRIP
Subject: Product Exclusion Request X-142-Japanesecorr12.pdf

Carrie:

Based upon the "Amended Product Specifications for Band Saw Steel" (X-142-Japanesecorr12.pdf) submitted to USTR on December 20, 2001, we have been informed that Greer Steel and Gibraltar Steel withdraw its objection to this product exclusion request. Thompson Steel Company, however, maintains its objection to this product exclusion request, and therefore the Association of Cold Rolled Strip Steel Producers maintains its objection to this product exclusion request.



Regards,
Mark Leventhal
Adduci, Mastriani & Schaumberg, LLP
1200 17th Street, NW
Washington, D.C. 20036
202-467-6300

Exhibit 5

Comparison of the Exclusion Definition for Ultra High Strength Cold-Rolled Steel (X-142.8) to ASTM A980

Comparison of the Exclusion Request Definition for Ultra High Strength Cold-Rolled Steel Sheet and ASTM A980

Note: Shading indicates where the ASTM A980 standard does not include an equivalent requirement for chemical or mechanical properties.

Revised Definition of Ultra High Strength Cold-Rolled Steel Sheet

Thickness (mm)		Yield Point (N/mm²)						Tensile Strength (N/mm²)		Elongation (%)										Flangeability (%)	Chemical Composition (mass %)					
		0.6=<T<0.8		0.8=<T<1.0		1.0=<T=<2.3				0.6=<T<0.8		0.8=<T<1.0		1.0=<T<1.2		1.2=<T<1.6		1.6=<T=<2.3			(max)					(min)
(min)	(max)	(min)	(max)	(min)	(max)	(min)	(max)	(min)	(max)	(min)	(max)	(min)	(max)	(min)	(max)	(min)	(max)	(min)	(max)	(min)	C	Si	Mn	P	S	Al
0.60	2.30	430	560	420	560	410	560	590	-	18	32	18	32	20	33	20	33	22	-	-	0.10	0.03	2.20	0.015	0.010	-
0.60	2.30	325	470	315	460	305	450	590	-	19	32	20	33	21	34	22	35	24	-	-	0.08	0.70	1.40	0.015	0.010	-
0.60	2.30	420	645	410	635	400	625	780	-	14	25	15	26	16	27	17	28	18	-	-	0.10	0.80	1.80	0.015	0.010	-
0.80	2.30	-	-	700	850	690	850	980	1080	-	-	11	20	12	21	13	22	13	-	30	0.19	1.60	2.20	0.020	0.010	-
0.80	2.30	-	-	590	730	580	730	980	1060	-	-	13	20	14	21	14	22	14	-	-	0.19	1.60	2.20	0.020	0.010	-
0.80	2.30	-	-	835	1225	825	1215	1180	-	-	-	5	10	6	17	7	18	8	-	-	0.15	0.80	2.00	0.010	0.010	-
1.00	2.00	-	-	-	-	980	1270	1270	-	-	-	-	-	6	17	6	17	6	-	-	0.15	0.80	2.00	0.010	0.010	-
1.00	2.00	-	-	-	-	1040	1500	1470	-	-	-	-	-	3	15	3	15	3	-	-	0.21	0.60	2.00	0.010	0.010	-

ASTM A980

Grade	Thickness (mm)		Yield Point (N/mm²)						Tensile Strength (N/mm²)*		Elongation (%)										Flangeability (%)	Chemical Composition (weight %)					
			0.6=<T<0.8		0.8=<T<1.0		1.0=<T=<2.3				0.6=<T<0.8		0.8=<T<1.0		1.0=<T<1.2		1.2=<T<1.6		1.6=<T=<2.3			(max)					(min)
	(min)	(max)	(min)	(max)	(min)	(max)	(min)	(max)	(min)	(max)	(min)	(max)	(min)	(max)	(min)	(max)	(min)	(max)	(min)	(max)	(min)	C	Si	Mn	P	S	Al
130	-	-	-	-	-	-	-	-	896 (130ksi)	-	-	-	-	-	-	-	-	-	-	-	-	0.10	-	0.60	0.030	0.035	0.01
160	-	-	-	-	-	-	-	-	1103 (160ksi)	-	-	-	-	-	-	-	-	-	-	-	-	0.15	-	0.60	0.030	0.035	0.01
190	-	-	-	-	-	-	-	-	1310 (190ksi)	-	-	-	-	-	-	-	-	-	-	-	-	0.23	-	0.60	0.030	0.035	0.01
220	-	-	-	-	-	-	-	-	1517 (220ksi)	-	-	-	-	-	-	-	-	-	-	-	-	0.28	-	0.60	0.030	0.035	0.01

*Calculated (1ksi = 6.894757 N/mm²)